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## Minimizing complications in intumescent white cataracts: A comparison between manual and femtosecond laser-assisted capsulotomy

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**Aim:** Aim of this study is to evaluate intraoperative complications during capsulorrhexis and phacoemulsification in intumescent white cataracts using two different viscosurgical techniques for the capsulorrhexis or performing a femtosecond laser-assisted capsulotomy.

**Methods:** In the two manual groups after capsular staining with trypan blue in the first group (21 patients) a medium viscous OVD was used whereas in the second group (20 cases) both medium and high viscous OVD have been used to create a central indentation of the anterior lens capsule before a CCC had been performed. In the third group (24 patients), the capsulorrhexis was performed with a femtosecond laser system. The capsule was stained intraoperatively with trypan blue and pulled out using a microsurgical forceps. Main outcome measures were the size of the CCC and analysis of complications during surgery.

**Results:** In the first group, deviation from target CCC diameter appeared in 12 cases compared to six cases in the second group. In the first group, in two cases a capsular tear appeared and one case had to be converted to ECCE with anterior vitrectomy. In the second group, there were no capsular tears. In the femtosecond laser-assisted group, one radial anterior tear occurred and in seven eyes an adherent tongue-like capsular adhesion; the mean deviation from the target diameter of the extracted capsule-discs valued 62±41 μm. An IOL could be implanted into the capsular bag in all cases.

**Conclusions:** Combination of two different OVDs with high viscous OVD placed central lead to a safe indentation of the anterior lens capsule and reduced intraoperative complications. Femtosecond laser-assisted capsulotomy in intumescent white cataracts was superior according to size, shape and safety.

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## The relationship between self-rated speech intelligibility and acceptable noise levels

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The Acceptable Noise Level (ANL) has received substantial attention due to its potential to predict hearing-aid use success. It is a subjective measure of patients' willingness to tolerate noise, while listening to speech at the most comfortable level. Previous research suggests no relationship between ANLs and objective speech recognition performance in noise for hearing-impaired listeners. However, the relationship between self-rated speech intelligibility and ANL is unknown. 46 hearing-impaired listeners and twenty normal-hearing listeners participated in the study. The ANLs were measured by Quick Speech-in-Noise (QuickSIN) test sentences in four-talker babble. The self-rated speech intelligibility and the objective speech recognition performance were both measured, using the same test format and materials from the QuickSIN protocol. The differences between the rating of intelligibility and objective measures reflect how accurately listeners can judge their ability to listen in noise. Pearson correlation was used for the data analysis. The data revealed a significantly moderate correlation ($r=0.6$, $p<0.0001$) between ANLs and self-rated speech intelligibility for hearing-impaired listeners and a weak but significant correlation of 0.4 for the normal-hearing listeners ($p=0.04$). No relationship was found between ANLs and the discrepancy of objective and subjective speech recognition performance for either group. The results indicated that listeners who rated themselves as highly able to listen to speech in noise were better able to tolerate noise than those who rated themselves as less able to listen in noise.

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